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ABSTRACT

An obvious source of information for assessing mental health program effectiveness comes from clients who have received the services and, indeed, much effort has been devoted to developing data collection instruments which are administered to clients upon completion of treatment. To assess the advantages and disadvantages of three treatment follow-up methods, i.e., face-to-face interviews, telephone interviews, and mailed questionnaires, 1100 clients were randomly assigned to one of the 3 follow-up methods, and were scheduled to be contacted approximately 180 days after intake using a well-documented treatment outcome measure. Response rates for the telephone interview and mailed questionnaire were approximately one-half as high as the face-to-face interview; yet for each method very few client background variables were related to whether or not clients responded. The mailed questionnaire was least affected by socially desirable responses and also cost less to administer than either of the interview methods. Given the pressure human service agencies are under to perform follow-up evaluations, the promising results found for the relatively inexpensive mailed questionnaire suggest a need for further research on the external validity of these findings. (Author/JAC)

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on Mental Health Treatment Outcome

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Alternative Methods for Collecting Data on Mental Health Treatment Outcome

Over the past decade mental health professionals have come under increasing pressure not only to conduct needs assessments, establish management information systems, and engage in several other monitoring functions, but also to evaluate the effectiveness of the services provided to their clients. An obvious source of information for assessing impact comes from clients who have received the services; and, indeed, much effort has been devoted to developing data collection instruments which are administered to clients upon completion of treatment (see Hagedorn, Beck, Neubert, & Werlin, 1976). Some of these instruments have been administered to clients during in-home, face-to-face interviews; others have been administered over the telephone, and still others have been administered through mailed questionnaires.

Selecting a particular method for collecting follow-up information requires consideration of several practical elements. A method should: (a) minimize sampling bias, (b) minimize response bias, and (c) minimize the cost of collecting follow-up data. No method is likely to optimize all of these elements, but rather one method is likely to be stronger with regard to one element and another stronger on a second element. Given information about the strengths and weaknesses of the alternatives, mental health professionals could make better informed decisions about which follow-up method to use.

Sampling bias. Face-to-face and telephone interviews have typically produced higher response rates than mailed questionnaires, although telephone rates may drop sharply when interviewing low-income people where the telephone is an infrequent fixture in the home.

Response bias. With regard to response bias, there is reason to believe that the methods might differ, with the face-to-face interview being most affected by socially desirable responses and the mailed questionnaire being least affected (Dillman, 1978). However, these differences may be influenced by other factors because Groves and Kahn (1979) reviewed a variety of studies which contradict each other with regard to social desirability differences among methods. The research reviewed, however, did not include clients of the mental health system or the types of sensitive issues (i.e., behavioral and emotional problems) that must be raised in treatment follow-up studies.

Follow-up costs. A final consideration in selecting a particular follow-up method is the relative cost of its administration. Outcome evaluation is very expensive to conduct, and this is a major reason why so little of it is done. Past research has suggested that face-to-face interviews are the most expensive to conduct and mailed questionnaires are the least expensive.

Purpose of the Present Study

The present study was designed to assess the advantages and disadvantages of the three major follow-up methods, i.e., face-to-face interviews, telephone interviews, and mailed questionnaires. The intent was to help satisfy the need for research designed to compare these methods using the same population, the same outcome measure, the same definition of cost, and the same definition of response rate. As Schainblatt (1977) has noted, such studies are extremely rare, and those that do exist have been general population surveys rather than client follow-up surveys.

The 1100 clients participating in the present study had received treatment services from the Denver Health and Hospitals Mental Health Program in Denver, Colorado. This community mental health center serves an urban population of primarily low-income people. Each client had been classified at intake into one of three diagnostic categories (Alcohol Abuse, Disorganized Thinking/Behavior, and Emotional Distress) and then randomly assigned to one of the three follow-up methods (face-to-face interview, telephone interview, or mailed questionnaire). By selecting clients who differed in terms of the problems they experienced, it was possible to investigate whether type of client was related to clients' ability or willingness to respond to each of the methods. The design may thus be viewed as a 3 x 3 factorial with type of client and follow-up method serving as independent variables.

Procedure

Each client was scheduled for follow-up approximately 180 days after intake using the Denver Community Mental Health Questionnaire. This instrument (see Ciarlo & Reihman, 1977) measures client personal and social functioning levels on 13 dimensions. The face-to-face and telephone interviews were conducted by five experienced interviewers who had completed a 40-hour training course. The face-to-face interviews were conducted in client households, and a maximum of three visits were made at any given address with each visit coming at different times of the day and week. For the telephone interviews, a maximum of five attempted phone calls were made at different times of the day and week to a particular client. Clients assigned to the mailed questionnaire were contacted with a maximum of three separate mail packages (waves).

Many aspects of Dillman's (1978) approach were used because of the overall success which it has produced.

Results

Response Rates

The type of follow-up method was related to whether or not a client responded. Approximately one-half (49.0%) of the clients assigned to the face-to-face interview responded, while the completion rates for the telephone interview and mailed questionnaire were 24.9% and 29.7%, respectively. Whether or not a client responded was also significantly related to what type of client he/she was, with the highest response rate occurring among emotionally distressed and disorganized thinking clients and the lowest among alcohol abuse clients.

Comparison of Respondents and Nonrespondents

Whenever response rates are substantially below 100%, an important question is whether or not respondents differed from nonrespondents, and if so, on what dimensions. The answers to these questions give information about the existence and type of sampling bias. Because demographic, diagnostic, and treatment history information was gathered at intake for the entire population of clients studied here, it was possible to compare those who completed follow-up questionnaires or interviews with those who did not on 17 intake measures.

Overall, the vast majority of these measures were not significantly related to whether or not a client responded. With the face-to-face interviews, those who were able to be contacted and were willing to respond tended to be poorer, minority, and female. Telephone respondents were wealthier, more severely impaired in terms of their primary diagnosis, seen more frequently in individual therapy and less often in a long-term

inpatient facility, and were more likely to have been previously hospitalized in a private institution. With the mailed questionnaire, respondents were seen in individual therapy more often, were more likely to have skilled occupations, and were more likely to be female.

Method Differences in Responses and Monetary Costs

One of the major purposes of this research was to determine whether different methods would elicit different responses from clients on a follow-up questionnaire, and if so, whether these differences would interact with type of client. To test these possibilities, a 3 (type of method) x 3 (type of client) analysis of variance was computed on each of the 13 subscales of the Denver Community Mental Health Questionnaire. A total of six scales yielded main effects for follow-up method while seven scales were significantly related to type of client. However, none of the interactions between these main effects was significant at $p < .05$. Analyses of covariance were also computed using the 3 x 3 design but covarying the client variables collected at intake. In no case did the pattern of results differ in any meaningful way from those received with the analysis of variance solutions.

In general, clients responding to the face-to-face and telephone interviews reported higher functioning levels than mailed questionnaire respondents. Assuming lower adjustment scores reflect more honest disclosure on the part of the client, the findings would favor the mailed questionnaire. In addition, the mailed questionnaire cost less to administer than either of the interview methods.

Discussion

Three major considerations in the decision about which follow-up method to use for an outcome evaluation of mental health clients are

sampling bias, response bias, and cost. Using these criteria to compare the three methods studied here, one could conclude that the mail questionnaire performed the best. With regard to response rate, the face-to-face interview was clearly superior to the other two methods. However, response rate usually is an index of sampling bias, and in the present study the intake measures allowed a direct determination of sampling bias through the comparisons of respondents and nonrespondents. All three methods showed some sampling bias, and it is hard to say which was worse.

Among the many types of potential response biases, a major interest of this research concentrated on social desirability. The reason was that in light of the sensitive nature of questions asked in mental health follow-up, social desirability is probably the response bias of most concern. The assumption was made that the lower the level of adjustment score, the more honest was the response. Given this assumption, the mail questionnaire once again performed the best.

Estimating the exact cost of a follow-up method is not an easy task. Much depends on the amount of the cost of such resources as office space, telephones, personnel time, etc., that can be absorbed by other programs within the organization. Determining the relative costs of methods, on the other hand, is easier. Quite simply, it is hard to imagine a situation where mail questionnaires would not be significantly cheaper than face-to-face or telephone interviews.

Different patterns of results for these methods might emerge if different client populations and/or different outcome measures are used. These clients were from a community mental health center serving low income, urban people. Perhaps sampling biases, response biases, and

costs would be different for a wealthier or a rural clientele. Given the pressure human service agencies are under to perform follow-up evaluations, and given the promising results found here for the relatively inexpensive mail questionnaire, researching the external validity of these findings seems imperative.

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